

SUBJECT INDEX TO VOLUME 30

- Acoustic emission, 35, 296
 GRP, 263
Ageing of polyester resin, 99
Aluminium matrix composites, 85, 155
Amplitude analysis (acoustic emission), 263
APC2, 280
Applications of MMC, 174
- Bolted joints (CFRP), 22
Buffer strips, 221
Bundles (of fibres), 50
- Calorimetry (PEEK), 144
Carbon fibre reinforced plastics (CFRP), 19, 203, 280
Carbon fibre reinforced PEEK, 280
Carbon fibres
 strength, 59
 surfaces, 119
Combined loading (fretting fatigue of CFRP), 25
Compcasting, 161
Concrete (steel fibre reinforced), 127
Counting bias, 282
Creep compliance (master curve), 112
Creep of PEEK, 140, 197
Crystallinity (PEEK), 189
Cyclic stress/strain curve, 5
- Debonding, 295
Deformation processing, 167
- Degradation (GRP), 54
Differential scanning calorimetry (DSC), 144
Distribution function (flaws), 60
DMA (short-fibre composites), 239
DSC (of PEEK), 144
Ductile composites, 12
Dynamic mechanical properties (PEEK), 197
Dynamical mechanical analysis (DMA), 103
- Electron emission (failure events), 37
Elevated temperature properties (MMC), 173
- Failure events (composites), 35
Fatigue (fretting, of CFRP), 19, 203
Fatigue (metal-matrix composites), 172
Fibre
 bundles, 50
 distributions (orientation), 289
 fragmentation, 303
 misalignment, 279
Flaw distribution function, 60
Fracto-emission, 36
Fretting fatigue (CFRP), 19, 203
Friction (at fibre/matrix interface), 295
- High-temperature properties (SiC fibres), 88
Hybrid composites (MMC), 180

SUBJECT INDEX TO VOLUME 30

- Acoustic emission, 35, 296
 GRP, 263
Ageing of polyester resin, 99
Aluminium matrix composites, 85, 155
Amplitude analysis (acoustic emission), 263
APC2, 280
Applications of MMC, 174
- Bolted joints (CFRP), 22
Buffer strips, 221
Bundles (of fibres), 50
- Calorimetry (PEEK), 144
Carbon fibre reinforced plastics (CFRP), 19, 203, 280
Carbon fibre reinforced PEEK, 280
Carbon fibres
 strength, 59
 surfaces, 119
Combined loading (fretting fatigue of CFRP), 25
Compcasting, 161
Concrete (steel fibre reinforced), 127
Counting bias, 282
Creep compliance (master curve), 112
Creep of PEEK, 140, 197
Crystallinity (PEEK), 189
Cyclic stress/strain curve, 5
- Debonding, 295
Deformation processing, 167
- Degradation (GRP), 54
Differential scanning calorimetry (DSC), 144
Distribution function (flaws), 60
DMA (short-fibre composites), 239
DSC (of PEEK), 144
Ductile composites, 12
Dynamic mechanical properties (PEEK), 197
Dynamical mechanical analysis (DMA), 103
- Electron emission (failure events), 37
Elevated temperature properties (MMC), 173
- Failure events (composites), 35
Fatigue (fretting, of CFRP), 19, 203
Fatigue (metal-matrix composites), 172
Fibre
 bundles, 50
 distributions (orientation), 289
 fragmentation, 303
 misalignment, 279
Flaw distribution function, 60
Fracto-emission, 36
Fretting fatigue (CFRP), 19, 203
Friction (at fibre/matrix interface), 295
- High-temperature properties (SiC fibres), 88
Hybrid composites (MMC), 180

- Impregnation (of polymer concrete), 127
- Interface
- failure, 299, 303
 - fibre/matrix, 295
 - stresses, 301
- Interfacial shear stress, 296
- Metal matrix composites
- mechanical properties, 169
 - MMC, 5, 85, 155
- Microdebond test, 298
- Misalignment of fibres, 279
- Nicalon (SiC) fibre, 85
- Normal interaction term (Tsai-Wu criterion), 251
- Out-of-plane misalignment (of fibres), 290
- Particulate composites, 156
- PEEK
- carbon fibre reinforced, 280
 - creep of, 140, 197
 - crystallinity, 189
 - dynamic mechanical properties, 197
 - elastic and viscoelastic properties, 185, 192
 - microstructure and properties, 185
 - physical ageing, 137
- Photoelectron spectroscopy (XPS), 119
- Photon emission (failure events), 35
- Physical ageing (plastics), 99, 137
- Polymer impregnation (of concrete), 127
- Powder metallurgy processing, 166
- Pull-out test, 296
- Random fibre composites, 239
- Rheocasting, 161
- Shift factor, 107, 143
- Short-fibre composites
- DMA, 239
 - metal-matrix, 155
- SiC reinforced aluminium, 85
- Single filament tests, 50, 296
- Sliding wear (CFRP), 207
- Spherulites (PEEK), 190
- Squeeze casting, 165
- Strain-hardening (fibres and matrix), 5
- Strength criterion (Tsai-Wu), 251
- Strength/length effect (carbon fibres), 59
- Stress concentration (at cut-outs), 221
- Stress/strain behaviour (metal matrix composites), 5
- Tsai-Wu criterion, 251, 274
- Viscoelastic behaviour (of polyester resin), 99
- Viscoelastic composites, 239
- Water degradation, 54
- Weakest link theory, 60
- Wear resistance (metal matrix composites), 171
- Weibull analysis, 59
- Whiskers, 157
- XPS, 119

CONTENTS OF VOLUME 30

Number 1

Guest Editorial	1
HANS LILHOLT (Denmark)	
Calculating the Stress-Strain Behaviour of Uniaxial Metallic Composites with Strain-hardening Components	5
H.-J. WEISS, R. KRUMPHOLD and S. SCHÄDLICH (DDR)	
Fretting Fatigue Studies on Carbon Fibre/Epoxy Resin Laminates: I—Design of a Fretting Fatigue Test Apparatus	19
K. FRIEDRICH, S. KUTTER and K. SCHULTE (FRG)	
Correlation of Photon and Acoustic Emission with Failure Events in Model Composites	35
A. S. CRASTO, R. COREY, J. T. DICKINSON, R. V. SUBRAMANIAN and Y. ECKSTEIN (USA)	
The Strength–Length Relationship for Carbon Fibres	59
K. K. PHANI (India)	
Book Reviews	73
Conference Diary	77

Number 2

British Composites Society: Chairman's Address	81
DEREK HULL	
Characterization of Nicalon (Sic) Reinforced Aluminium Wire as a Function of Temperature.	85
Y. FAVRY and A. R. BUNSELL (France)	
The Effects of Physical Aging on the Viscoelastic Behavior of a Thermoset Polyester	99
V. F. JANAS and R. L. McCULLOUGH (USA)	
A Study of the Surface of Carbon Fiber by Means of X-ray Photoelectron Spectroscopy—III	119
DA YOUXIAN, WANG DIANXUN, SUN MUJIN, CHEN CHUANZHENG and YUE JIN (China)	

Strength of Steel-Fibre-Reinforced Polymer Concrete: Effect of Impregnation Technique	127
GÜNGÖR GÜNDÜZ and NILÜFER YALÇIN (Turkey)	
Physical Aging Characteristics of Polyether Ether Ketone	137
A. A. OGALE and R. L. McCULLOUGH (USA)	
Announcement	149
Conference Diary	151

Number 3

Discontinuously-reinforced Aluminium Matrix Composites	155
FRANCK A. GIROT, J. M. QUENISSET and R. NASLAIN (France)	
Influence of Microstructure on Elastic and Viscoelastic Properties of Polyether Ether Ketone	185
A. A. OGALE and R. L. McCULLOUGH (USA)	
Fretting Fatigue Studies of Carbon Fibre/Epoxy Resin Laminates. Part II: Effects of a Fretting Component on Fatigue Life	203
K. SCHULTE, K. FRIEDRICH and S. KUTTER (Federal Republic of Germany)	
An Assessment of Buffer Strips for Reduction of Stress Concentration at Cutouts in Composite Laminates	221
L. R. DHARANI (USA)	
Book Review	233
Conference Diary	236

Number 4

Dynamic Mechanical Analysis of Some Randomly-Oriented Viscoelastic Short-Fiber Composites	239
C. VALLIANOS (France)	
The Determination of the Normal Interaction Term in the Tsai-Wu Tensor Polynomial Strength Criterion	251
K. E. EVANS and W. C. ZHANG (UK)	
Mechanical and Acoustic Emission Response of Unidirectional and Cross-Plied GRP Laminates	263
P. HENRAT, A. VAUTRIN (France) and B. HARRIS (UK)	
Measurement of Small Angle Fiber Misalignments in Continuous Fiber Composites	279
S. W. YURGARTIS (USA)	

Debonding and Friction at Fibre-Polymer Interfaces. I: Criteria for Failure and Sliding	295
M. R. PIGGOTT (Canada)	
Conference Report	307
Book Review	309
Conference Diary	313
Subject Index	316

Contents of Composite Structures

As a service to readers, the contents list of the current issue of this sister journal is reproduced here.

Volume 8, Number 3

Determination of Calibration Constants for the Hole-Drilling Residual Stress Measurement Technique Applied to Orthotropic Composites—Part II: Experimental Evaluations	165
C. B. PRASAD, R. PRABHAKARAN and S. TOMPKINS (USA)	
Mechanical and Structural Properties of a GRP Pultruded Section	173
G. D. SIMS, A. F. JOHNSON and R. D. HILL (UK)	
Thermal Buckling of Laminated Cylindrical Plates	189
LIEN-WEN CHEN and LEI-YI CHEN (ROC)	
Shear Buckling of Corrugated Composite Panels	207
K. P. RAO (USA)	
Finite Element Analysis of Composite Revolution Structures Wound by Wide Plies	221
J. P. JEUNETTE (Argentina), G. LASCHET (Belgium), P. CHARPENTIER (France) and PH. DELOO (Belgium)	
Book Reviews	
<i>Industrial Vibration Modelling</i> . Edited by J. Caldwell and R. Bradley, Martinus Nijhoff, Dordrecht, 1986	239
(Reviewed by John S. Paul)	
<i>Engineering Composite Materials</i> . By Bryan Harris, The Institute of Metals, London, 1986	240
<i>Fracture of Non-metallic Materials</i> . Edited by Klaus P. Herrmann and Lars Hannes Larsson, D. Reidel, Dordrecht, 1986	241
(Reviewed by I. H. Marshall)	
Announcements	242